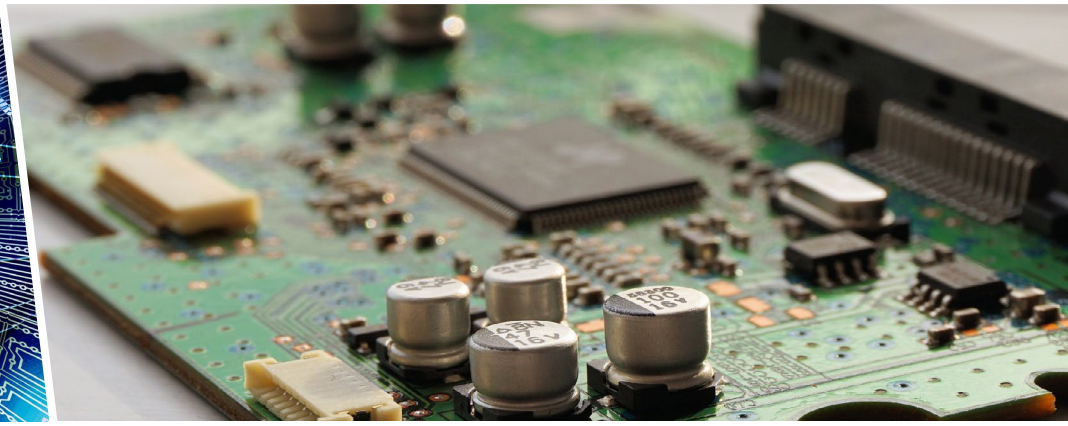
COLLEGE OF
ENGINEERING, ARCHITECTURE
AND TECHNOLOGY

CPE

COMPUTER ENGINEERING



WHAT IS COMPUTER ENGINEERING?

Computer Engineering encompasses a broad range of technologies that utilize digital devices for the benefit of society. Subdisciplines include digital electronics, VLSI chips, embedded controllers, networking, software development, memory and storage devices, cloud computing, internet-of-things, computer security, application-specific IC's, graphics processing units, and computer architecture.

WHY COMPUTER ENGINEERING AT OSU?

The School of Electrical and Computer Engineering at OSU provides high quality, comprehensive education for both undergraduate and graduate degree seeking students. The School incorporates software, hardware, and design experiences in its curriculum. Our faculty are committed to student excellence and our students are highly recruited by industry. We emphasize both theory and application to prepare students for their first entry-level job.

HIGHLIGHTS

- Ample scholarships to a diverse student body
- Dual BS Electrical Engineering and BS Computer Engineering degree
- "4+1" BS Computer Engineering and Master of Engineering degree
- Software Engineering option
- Ample software, hardware, computer, laboratory, and design experiences
- Highly engaged faculty and student-centric culture

CAREER INDUSTRIES & FOCUS AREAS

OPTIONS

"4+1" Accelerated BS and Master of Engineering program

Dual bachelor degree option for computer and electrical engineering

CAREER OPPORTUNITIES

- VLSI and computer architecture engineering
- Software engineering
- Memory and storage engineering
- Networking and cybersecurity engineering
- Computer systems engineering
- Consulting, manufacturing, management, and marketing

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AND TECHNOLOGY

BACHELOR OF SCIENCE

COMPUTER ENGINEERING

Typical Four-Year Curriculum

FIRST YEAR

Fall Semester

ENGR	1111	Intro to Engr
MATH	2144	Calculus I
CHEM	1414	Gen Chemistry
CS	1113	Comp Science I
ENGL	1113	Engl Comp I

Spring Semester

CS	2433	C/C++ Programming
CS	2351	UNIX Prog
MATH	2153	Calculus II
POLS	1113	American Gov't
PHYS	2014	Gen Physics I
ECEN	2233	Digital Logic Design

SECOND YEAR

Fall Semester

CS	3653	Discrete Math
PHYS	2114	Gen Physics II
MATH	2233	Diff Equations
ENSC	2611	Electrical Fab Lab
ECEN	2714	Fund Elec Circuits

Spring Semester

MATH	2163	Calculus III
ECEN	3903	Intro Semiconductor Devices
ENSC	3213	Comp Based Systems
ECEN	3714	Network Analysis
HIST	1103	American History

THIRD YEAR

Fall Semester

ECEN	3513	Signal Analysis
ECEN	3613	Applied Fields and Waves
ENGL	3323	Technical Writing
CS	3353	Data Structures
ECEN	3314	Electr Dev & Appl

Spring Semester

IEM	3503	Engr Economics
ECEN	4503	Random Signals
ECEN	4243	Computer Architecture
XXXX	XXXX	"H" Elective
MATH	3013	Linear Algebra

FOURTH YEAR

Fall Semester

ECEN	4013	Design Engr Sys
ECEN	4303	Dig Elec Ckt Des
ECEN	4213	Emb Comp Sys
XXXX	XXXX	"S" Elective
ECEN	XXXX	Elective

Spring Semester

ECEN	4024	Capstone Design
CS	4323	Operating Systems
ECEN	XXXX	Controlled Elective
ECEN	XXXX	Elective
XXXX	XXXX	"H" Elective

ECE ELECTIVES

ECEN	3113	Energy, Environment & Econ
ECEN	3623	Applied Fields and Waves II
ECEN	3723	Systems I
ECEN	3913	Solid State Electronic Devices
ECEN	4133	Power Electronics
ECEN	4153	Power Sys Anlys & Design
ECEN	4233	High Speed Comp Arithmetic
ECEN	4273	Software Engineering
ECEN	4283	Computer Networks
ECEN	4313	Linear Elect. Circuit Design
ECEN	4353	Communication Electronics
ECEN	4413	Automatic Control Systems
ECEN	4523	Communication Theory
ECEN	4533	Data Communications
ECEN	4613	Microwave Engineering
ECEN	4743	Intro Biomed Engr
ECEN	4763	Intro to Digital Signal Proc
ECEN	4773	Real Time Digital Sig Proc
ECEN	4823	Design of Optical Systems
ECEN	4843	Design of Lasers & Systems

ECE CONTROLLED ELECTIVES

*Any 3000 level or above from the following ECSC, ENGR, ECEN, BAE, MAE, CIVE, IEM, PHYS, MATH, CHEM, STAT, or CS

TOTAL HOURS: 125

Accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

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This course plan is for general guidance only. An official course plan will be provided upon enrollment.

Contact | ceat.recruitment@okstate.edu | (405)-744-5279